



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/261,080 03/02/99 SCHUSTER

K Z-98005.5.US

EXAMINER

MM91/1220

M.ROBERT KESTENBAUM
11011 BERMUDA DUNES NE
ALBUQUERQUE NM 87111

FULLER, R

ART UNIT

PAPER NUMBER

2851

DATE MAILED:

12/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/261,080

Applicant(s)
Schuster, et al.

Examiner
Rodney Fuller

Group Art Unit
2851



- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

- ☒ Claim(s) 1-16 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-9, 11, 12, 14, and 15 is/are rejected.
- ☒ Claim(s) 10, 13, and 16 is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 & 5
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2851

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.
2. Claims 13 and 16 depend from claim 10 and therefore include the deficiencies of claim 10. Accordingly, the claims has not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-9, 11, 12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. In claim 1 (line 2), claim 2 (line 2), claim 8 (line 6), and claim 9 (line 7); the term “substantially” is a relative term that renders the claim indefinite.
6. Claims 3-5 depend from claim 1 and therefore include the deficiencies of claim 1

Art Unit: 2851

7. Claims 6, 7, 11 and 14 depend from claim 2 and therefore include the deficiencies of claim 2.
8. Claim 12 depends from claim 9 and therefore include the deficiencies of claim 9.
9. Claim 14 recites the limitation "said crystal" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-3, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vernon (US 6,150,060) in view of Szarmes (US 5,590,148).

Vernon (US 6,150,060) discloses "a reticle with support material of transparent, optically uniaxial crystal" and "a reticle based on MgF_2 support material." (See column 4, lines 3-23) However, Vernon (US 6,150,060) does not specifically disclose wherein "the principal axis of said crystal is substantially perpendicular to the surface of said reticle." Szarmes (US 5,590,148) discloses (column 16, lines 23-35) that: "In all designs employing uniaxial crystal, the two preferred orientations of the optical c-axis are the ones ..." "in which the c-axis lies in the plane of the crystal, or the c-axis possesses a projection onto the plane of incidence which is perpendicular to

Art Unit: 2851

the surface of the crystal.” Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Vernon (US 6,150,060) by wherein “the principal axis of said crystal is substantially perpendicular to the surface of said reticle,” since it has been held to be within the general skill of a worker in the art to select a known material, or orientation of material, on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 125 USPQ 416.

12. Claims 4, 5, 7, 11, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vernon (US 6,150,060) in view of Szarmes (US 5,590,148) as applied to claims 1, 2 and 9 above, and further in view of Ashida (US 6,153,877).

A further difference between modified Vernon (US 6,150,060) and the claimed invention is “a cooling device.” However, the use of a “cooling device” in a photolithography system is routine in the art as is evident from the teaching of Ashida (US 6,153,877) (see abstract). Thus it would have been obvious to one of ordinary skill at the time the invention was made to further modify Vernon (US 6,150,060) by including a “cooling device.” The ordinary artisan would have been motivated to further modify Vernon (US 6,150,060) in the manner described above for at least the purpose of improving the pattern position precision by stabilizing the temperature of the reticle as described by Ashida (US 6,153,877) in column 1, lines 29-40.

Art Unit: 2851

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Hamada, et al. (US 5,693,382).

Hamada (US 5,693,382) discloses all the structures set forth in the claim. Hamada (US 5,693,382) discloses "a pellicle of fluoride crystal." (see column 4, lines 9-20)

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Fujita, et al. (US 5,601,955); Nakagawa, et al. (US 5,085,899); and Legare, et al. (US 5,168,001) each disclose a reticle with an associated pellicle.

Art Unit: 2851

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703)308-2847.

REF

December 12, 2000


Russell Adams
Primary Examiner